

**BY ORDER OF THE COMMANDER
916TH AIR REFUELING WING**

**916TH AIR REFUELING WING
INSTRUCTION 21-107**



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Maintenance

**AIRCRAFT WEIGHT AND BALANCE
MANAGEMENT**

COMPLIANCE WITH THIS PUBLICATION IS MANDATORY

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This instruction implements Air Force Policy Directive (AFPD) 21-1, *Air and Space Maintenance*. This instruction extends the guidance of Air Force Instruction (AFI) 21-101 Air Force Reserve Command (AFRC) Supplement, *Aircraft and Equipment Maintenance Management*. Any other specific references will be addressed in the applicable section. This instruction establishes procedures to manage the Aircraft Weight and Balance Program in accordance with applicable technical data and Air Force directives. This instruction applies to all 916th Maintenance Group/Operations personnel. Other 916th Air Refueling Wing personnel that deploy to the flight line must conform to this document. It is written with Air Force quality principles in mind to provide guidance and to allow some workshop flexibility. Refer recommended changes and questions about this publication to the Office of Primary Responsibility (OPR) using the Air Force AF Form 847, *Recommendation for Change of Publication*. Ensure all records created as prescribed in this publication are maintained in accordance with Air Force Manual (AFMAN) 33-363, *Management of Records*, and disposed of in accordance with the Air Force Records Disposition Schedule (RDS) located at <https://www.my.af.mil/gcss-af61a/afrims/afrims/rds>

SUMMARY OF CHANGES

This interim change updates both the certifier and approver, as well as updates references to AFPD 21-1, *Maintenance of Military Material*, T.O. 1-1B-50, *Basic TO for Aircraft Weight and Balance*, AFI 11-2KC-135V3, *C/KC-135 Operations Procedures*, and AFMAN 33-363,

Management of Records. Additionally, this interim change removes specific paragraph references in paragraph 2.1.3. A margin bar (|) indicates newly revised material.

1. General.

1.1. This instruction applies to all 916th Maintenance Group and 916th Operations Group personnel involved in aircraft configuration including the removal, installation, or relocation of -21, aircrew flight equipment, permanent or temporary equipment or accessories on the aircraft. All personnel involved shall ensure strict compliance with this instruction. This instruction outlines responsibilities and procedures for aircraft weight and balance management.

2. Responsibilities:

2.1. Quality Assurance (QA)

2.1.1. Is responsible for the Weight and Balance Program including basic aircraft weight calculations and configuration changes.

2.1.2. The Air Force Standard Automated Weight and Balance (AWBS) program will be used to maintain and print automated weight and balance records.

2.1.3. Aircraft specific primary books and backup data disks will be stored in QA. The handbooks will be arranged in accordance with T.O. 1-1B-50, Basic TO for Weight and Balance Record.

2.1.4. The 916th Maintenance Group Weight and Balance Manager will notify the 916th Operations Group Stan-Eval (OGV) Weight and Balance Non-Commissioned Officer in Charge (NCOIC) of aircraft basic weight and moment changes.

2.1.5. Quality Assurance will print and provide a locally computer generated KC-135 Load Planning Worksheet for Tanker Task Force, alert duty, daily and any special configuration.

2.1.6. Quality Assurance will conduct random aircraft compliance evaluations to ensure proper configuration is being maintained.

2.2. Aircraft Maintenance Squadron (AMXS)

2.2.1. Ensure that applicable local computer generated load planning worksheet is maintained at all times in the supplemental weight and balance book and that aircraft are configured per installed load planning worksheet.

2.2.2. Personnel will enter a Red X in the AFTO Form 781A, *Maintenance Discrepancy and Work Document*, whenever supplemental weight and balance book is removed from the aircraft.

2.2.3. Ensure Quality Assurance is notified when aircraft return to home station from any Air Logistics Center (ALC) or contractor facility where extensive maintenance was performed. W&B inventories are required prior to the first flight after arrival.

2.3. Plans and Scheduling

2.3.1. Coordinate with 916 OG/OGV, QA, Production Super, and -21 to ensure compliance with mission directives and configuration requirements.

2.3.2. Will assign a job control number for completed Time Compliance Technical Order (TCTO) or modification information for weight and balance changes to QA.

2.4. Load Plan work Sheets

2.4.1. Load plan worksheets derive from AFI11-2KC-135V3, *C/KC-135 Operations Procedures*, ADDENDA-A. Work sheets will be updated in conjunction with DD Form 365-1, *Weight Checklist Record, Chart A – Basic* or DD Form 365-3, *Weight and Balance Record, Chart C - Basic* for changes or Recertification.

2.4.2. Original load plan works sheets can be electronically signed or physically signed by the appropriate weight and balance manager and will be used in aircraft supplemental weight and balance book.

2.4.3. Newly developed Load Plan worksheets will be designed and certified by QA and routed through OGV, 916th Aircrew Flight Equipment and the 916th Sortie Support Flight for recommendations.

3. Flow Process for Aircraft Configuration Changes.

3.1. Perform following when aircraft configuration changes:

3.1.1. 916th Maintenance Operations Flight (MOF)/Plans and Scheduling (P&S) will notify 916 AMXS Production Superintendent/ Expediter, QA and –21 as soon as possible to ensure compliance with mission directives and configuration requirements.

3.1.2. Quality Assurance will provide the applicable load plan worksheet as required for mission accomplishments. Only one load plan worksheet will be placed in the weight and balance handbook at a time.

3.1.3. The assigned Crew Chief has overall responsibility to ensure correct aircraft configuration. They will ensure load planning worksheets are placed in the supplemental W&B book (to the right of the Chart C). The Production Superintendent/ Expediter will then coordinate upload with 916th Aircrew Flight Equipment and 916th Sortie Support Flight.

3.1.4. 916th Aircrew Flight Equipment, 916th Sortie Support Flight and Crew Chiefs will position required mission equipment per applicable load planning worksheet.

3.1.5. If multiple configurations will be needed when an aircraft is away from home station the following will apply:

3.1.5.1. The primary Temporary Duty (TDY) Crew Chief will insert the applicable load planning worksheet to the right of Chart C when the configuration changes. The primary Crew Chief will ensure that all dash 21 and life support equipment is positioned per new mission load planning worksheet.

3.1.5.2. Production Superintendent/Expediter will ensure aircraft is returned to the appropriate configuration upon return from TDY.

4. Un-configured Defuel Operations.

4.1. Defuel supervisor will calculate final defuel values to ensure aircraft remains within Center of Gravity (CG) limits throughout the defuel operation.

*CRAIG B. SHENKENBERG, Colonel, USAFR
Commander

Attachment 1**GLOSSARY OF REFERENCES AND SUPPORTING INFORMATION*****References***

AFPD 21-1, *Air and Space Maintenance*, 25 February 2003

AFI 11-2KC-135V3, *C/KC-135 Operations Procedures*, 15 August 2013

AFMAN 33-363, *Management of Records*, 1 March 2008

AFI 11-2KC-135V3, *C/KC-135 Operations Procedures*, 18 September 2008

AFMAN 33-363, *Management of Records*, 9 April 2015

T.O. 1-1B-50, *Basic TO for Aircraft Weight and Balance*, 01 August 2015

T.O. 1-1B-50, *Basic TO for Aircraft Weight and Balance*, 1 April 2008

Adopted Forms

AFTO Form 781A, *Maintenance Discrepancy and Work Document*

DD Form 365-1, *Weight Checklist, Chart A - Basic*

DD Form 365-3, *Weight and Balance Record, Chart C - Basic*

AF IMT 847, *Recommendation for Change of Publication*

AFPD 21-1, *Maintenance of Military Material*, 29 October 2015

Abbreviations and Acronyms

AFI—Air Force Instruction

AFMAN—Air Force Manual

AFPD—Air Force Policy Directive

AFRC—Air Force Reserve Command

AFTO—Air Force Technical Order

ALC—Air Logistics Center

AMXS—Aircraft Maintenance Squadron

ARS—Air Refueling Squadron

ARW—Air Refueling Wing

AWBS—Air Force Standard Automated Weight and Balance

CC—Commander

CG—Center of Gravity

MOC—Maintenance Operation Control

MOF—Maintenance Operations Flight

MXQ—Maintenance Quality Assurance

NCOIC—Non-Commissioned Officer in Charge

OG—Operations Group

OI—Operating Instruction

OPR—Office of Primary Responsibility

QA—Quality Assurance

P&S—Plans and Scheduling

RDS—Records Disposition Schedule

TCTO—Time Compliance Technical Order

TDY—Temporary Duty

W&B—Weight and Balance